CLAIMS:

1. A magnetic resonance imaging device, comprising at least:

a) a main magnet system (2) for generating a steady magnetic field in a measuring space of the magnetic resonance imaging device;

b) a gradient system (3) for generating a magnetic gradient field in said measuring space; and

c) an eddy current shield system;

characterized in that the eddy current shield system comprises at least one perforated eddy current screen (13, 14), wherein the or each perforated eddy current screen (13, 14) is assigned to the main magnet system (2).

2. A magnetic resonance imaging device according to claim 1, characterized in that the or each perforated eddy current screen (13, 14) is flexibly connected to the main magnet system (2).

3. A magnetic resonance imaging device according to claim 1, characterized in that the or each perforated eddy current screen (13, 14) is designed in a way that the degree of perforation is in the range of 0.1% to 95%.

4. A magnetic resonance imaging device according to claim 3, characterized in that the or each perforated eddy current screen (13, 14) is designed in a way that the degree of perforation is in the range of 10% to 50%.

5. A magnetic resonance imaging device according to claim 1, characterized in that the or each perforated eddy current screen (13, 14) is designed as a constraining layer structure, wherein the constraining layer structure comprises at least one perforated plate-like layer (19, 20) and at least one perforated visco-elastic layer (21).

6. A magnetic resonance imaging device according to claim 5, characterized in that the constraining layer structure comprises two perforated plate-like layers (19, 20) and

one perforated visco-elastic layer (21), wherein the visco-elastic layer (21) is sandwiched between the two plate-like layers (19, 20).

7. A magnetic resonance imaging device according to claim 1, characterized in that the or each eddy current screen (13, 14) has a thickness being thin enough to minimize radiation of acoustic noise and being thick enough to maximize shielding against the magnetic field radiated by the gradient system (3).

8. A magnetic resonance imaging device according to claim 7, characterized in that the or each eddy current screen (13, 14) has a thickness in the range of 0.01 mm to 10 mm.

9. A magnetic resonance imaging device according to claim 8, characterized in that the or each eddy current screen (13, 14) has a thickness in the range of 1 mm to 5 mm.

10. A magnetic resonance imaging device according to claim 7, characterized in that the or each eddy current screen (13, 14) has an increased thickness in the region in which the eddy current screen (13, 14) is mounted to the main magnet system (2).

11. A magnetic resonance imaging device according to claim 2, characterized in that the or each eddy current screen (13, 14) is flexibly attached to the main magnet system (2) by elastic mounting means (18), especially by flexible rubber means.

12. A magnetic resonance imaging device according to claim 1, characterized in that the or each eddy current screen (13, 14) is positioned at least in the region of the two lateral flanges (15, 16) of the main magnet system (2).

13. A magnetic resonance imaging device according to claim 12, characterized in that the or each eddy current screen (13, 14) is positioned in the region of the lateral flanges (15, 16) of the main magnet system (2) and in addition in the region of the bore hole between the main magnet system (2) and the gradient system (3).

14. A magnetic resonance imaging device according to claim 1, characterized in that the or each eddy current screen (13, 14) is positioned at least in the region of the bore hole between the main magnet system (2) and the gradient system (3).

15. A magnetic resonance imaging device according to claim 14, characterized in that the or each eddy current screen (13, 14) is positioned in the region of the bore hole and in addition in the region of the lateral flanges (15, 16) of the main magnet system (2).